

**REMARKS**

In the non-final Office Action, the Examiner rejects claims 20-26 under 35 U.S.C. § 103(a) as unpatentable over WOMACK et al. (U.S. Patent No. 5,982,819) in view of MAEJIMA (U.S. Patent No. 5,940,019); and allows claims 1-19. Applicant respectfully traverses the rejection of claims 20-26. Claims 1-26 remain pending.

Applicant notes with appreciation the indication that claims 1-19 are allowable over the art of record.

Claims 20-26 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over WOMACK et al. in view of MAEJIMA. Applicant respectfully traverses this rejection.

Independent claim 20 is directed to a digital tuner comprising a first plurality of digitizers, where each digitizer in the first plurality of digitizers is configured to receive a plurality of carrier signals and comprises a variable gain amplifier configured to amplify the plurality of carrier signals, the variable gain amplifier being set as a function of the plurality of carrier signals received at the each digitizer, and an analog-to-digital (A/D) converter operatively coupled to an output of the variable gain amplifier and being configured to receive the amplified plurality of carrier signals and convert the amplified plurality of carrier signals to a digital stream of data. The digital tuner further comprises a second plurality of receiver front-ends, where each receiver front-end of the second plurality of receiver front-ends comprises a scaler configured to receive a digital stream of data and dynamically scale the digital stream of data to an essentially same peak

magnitude. WOMACK et al. and MAEJIMA, whether taken alone or in any reasonable combination, do not disclose or suggest this combination of features.

For example, WOMACK et al. and MAEJIMA do not disclose or suggest a variable gain amplifier configured to amplify the plurality of carrier signals, where the variable gain amplifier is set as a function of the plurality of carrier signals received at each digitizer. The Examiner relies on element 425 of WOMACK et al. as allegedly disclosing this feature (Office Action, pg. 2). Applicant respectfully disagrees with the Examiner's interpretation of WOMACK et al.

Element 425 of WOMACK et al. corresponds to an intermediate frequency filter (col. 5, lines 2-3). WOMACK et al. in no way disclose or suggests that intermediate frequency filter 425 is a variable gain amplifier. Moreover, WOMACK et al. in no way discloses or suggests that intermediate frequency filter 425 is configured to amplify a plurality of carrier signals, or that intermediate frequency filter 425 is set as a function of the plurality of carrier signals received at each digitizer.

In addition, Applicant notes that the Examiner relies on the A/D converter 409 of WOMACK et al. as allegedly corresponding to the first plurality of digitizers recited in claim 20 (Office Action, pg. 2). Claim 20 recites that the digitizer includes the variable gain amplifier. However, WOMACK et al. clearly discloses A/D converter 409 and intermediate frequency filter 425 as being separate devices (see Fig. 4 of WOMACK et al.). WOMACK et al. in no way discloses or suggests that A/D converter 409 includes intermediate frequency filter 425, as would be required by the Examiner's interpretation of claim 20.

The disclosure of MAEJIMA does not remedy the deficiencies in the disclosure of WOMACK et al. set forth above.

For at least the foregoing reasons, Applicant submits that claim 20 is patentable over WOMACK et al. and MAEJIMA, whether taken alone or in any reasonable combination.

Claims 21-26 depend from claim 20. Therefore, these claims are patentable over WOMACK et al. and MAEJIMA, whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 20. Moreover, these claims recite additional features not disclosed or suggested by WOMACK et al. and MAEJIMA.

For example, claim 21 recites that the number of digitizers in the first plurality of digitizers differs from a number of receiver front-ends in the second plurality of receiver front-ends. The Examiner relies on WOMACK et al. for allegedly disclosing this feature (Office Action, pg. 3). Applicant respectfully disagrees with the Examiner's allegation.

Applicant notes that the Examiner admits that WOMACK et al. does not disclose a second plurality of receiver front-ends (see Office Action, pg. 3). Therefore, it is unclear how the Examiner can reasonably rely on WOMACK et al. for disclosing that the number of digitizers in the first plurality of digitizers differs from a number of receiver front-ends in the second plurality of receiver front-ends, as recited in claim 21. Neither WOMACK et al. nor MAEJIMA discloses or suggests this feature.

For at least these additional reasons, Applicant submits that claim 21 is patentable over WOMACK et al. and MAEJIMA, whether taken alone or in any reasonable combination.

Claim 24 recites that each receiver front-end of the second plurality of receiver front-ends comprises a plurality of clock domains comprising a first clock domain operating at a first rate and a second clock domain operating at a second rate. The Examiner appears to admit that WOMACK et al. and MAEJIMA do not disclose this feature (Office Action, pg. 4). The Examiner alleges that "[t]hough not described, it is well established that a digital signal processor uses a plurality of clock domains via frequency dividers and/or multiplier to provide various clock signals needed to process signals" (Office Action, pg. 4). Applicant submits that this general allegation by the Examiner is insufficient for establishing a *prima facie* case of obviousness. If the Examiner maintains this rejection, Applicant respectfully requests that the Examiner provide a reference that supports the Examiner's allegation and explain why one skilled in the art at the time of Applicant's invention would have been motivated to incorporate the recited plurality of clock domains into the WOMACK et al. system.

For at least these additional reasons, Applicant submits that claim 24 is patentable over WOMACK et al. and MAEJIMA, whether taken alone or in any reasonable combination.

Claim 25 recites that the second rate is a sub-multiple of the first rate. The Examiner does not address this feature in the Office Action. As such, a *prima facie* case of obviousness has not been established with respect to claim 25. If this rejection is maintained, Applicant respectfully requests that the Examiner specifically address the above feature of claim 25.

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For at least these additional reasons, Applicant submits that claim 25 is patentable over WOMACK et al. and MAEJIMA, whether taken alone or in any reasonable combination.

Claim 26 recites that the second rate is selectable. The Examiner does not address this feature in the Office Action. As such, a *prima facie* case of obviousness has not been established with respect to claim 26. If this rejection is maintained, Applicant respectfully requests that the Examiner specifically address the above feature of claim 26.

For at least these additional reasons, Applicant submits that claim 26 is patentable over WOMACK et al. and MAEJIMA, whether taken alone or in any reasonable combination.

In view of the foregoing remarks, Applicant respectfully requests the Examiner's reconsideration of the application and the timely allowance of the present application.

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To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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